```
-95  ttaactctctggtctccgtgtctcctctcttctcctgctgcttccttttaacactctctt  -36
-35  catttgccttttgatttagatccaaagaagcagacATGTCCTCGGCGCCGTCTCCGGGG    24
                                        M  S  S  A  P  S  P  G
 25  ACTGGTTCGCCTCCATCTCCACCATCAAACTCCACAACCACCACTCCTCCTCCAGCTTCC   84
      T  G  S  P  P  S  P  P  S  N*  S  T  T  T  T  P  P  P  A  S
 85  GCTCCTCCTCCCACCACACCTTCTTCTCCTCCGCCGCCATCCACTATTCCGACATCTCCT  144
      A  P  P  P  T  T  P  S  S  P  P  P  P  S  T  I  P  T  S  P
145  CCTCCTTCTTCTCGCTCTACACCTTCTGCTCCTCCTCCATCTCCACCAACTCCATCTACG  204
      P  P  S  S  R  S  T  P  S  A  P  P  P  S  P  P  T  P  S  T
205  CCGGGATCTCCACCTCCTCTTCCTCAGCCGTCTCCACCCGCTCCAACTACGCCCGGATCT  264
      P  G  S  P  P  P  L  P  Q  P  S  P  P  A  P  T  T  P  G  S
265  CCACCCGCACCTGTTACTCCTCCTACTCGAAACCCTCCACCTTCAGTCCCAGGACCACCG  324
      P  P  A  P  V  T  P  P  T  R  N  P  P  P  S  V  P  G  P  P
325  TCCAATCCTTCACGCGAAGGAGGATCTCCTCGACCTCCATCTTCTCCCTCGCCGCCGTCT  384
      S  N  P  S  R  E  G  G  S  P  R  P  P  S  S  P  S  P  P  S
385  CCTTCTTCCGACGGTTTATCAACAGGAGTGGTGGTGGGAATCGCCATCGGAGGAGTCGCT  444
      P  S  S  D  G  L  S  T  G  V  V  V  G  I  A  I  G  G  V  A
445  CTGCTTGTGATAGTGACTCTGATTTGTCTCCTCTGTAAGAAGAAACGACGGAGAGACGAA  504
      L  L  V  I  V  T  L  I  C  L  L  C  K  K  K  R  R  R  D  E
505  GAAGATGCTTACTATGTTCCTCCGCCACCTCCTCCTGGTCCCAAAGCCGGAGGACCTTAC  564
      E  D  A  Y  Y  V  P  P  P  P  P  P  G  P  K  A  G  G  P  Y
565  GGTGGACAGCAGCAACAATGGCGGCAACAAAACGCAACACCACCGTCAGATCATGTCGTG  624
      G  G  Q  Q  Q  Q  W  R  Q  Q  N  A  T  P  P  S  D  H  V  V
625  ACGTCACTACCACCACCACCTAAGGCTCCATCTCCACCACGGCAACCTCCTCCACCTCCA  684
      T  S  L  P  P  P  P  K  A  P  S  P  P  R  Q  P  P  P  P  P
```

FIG. 1C(1)

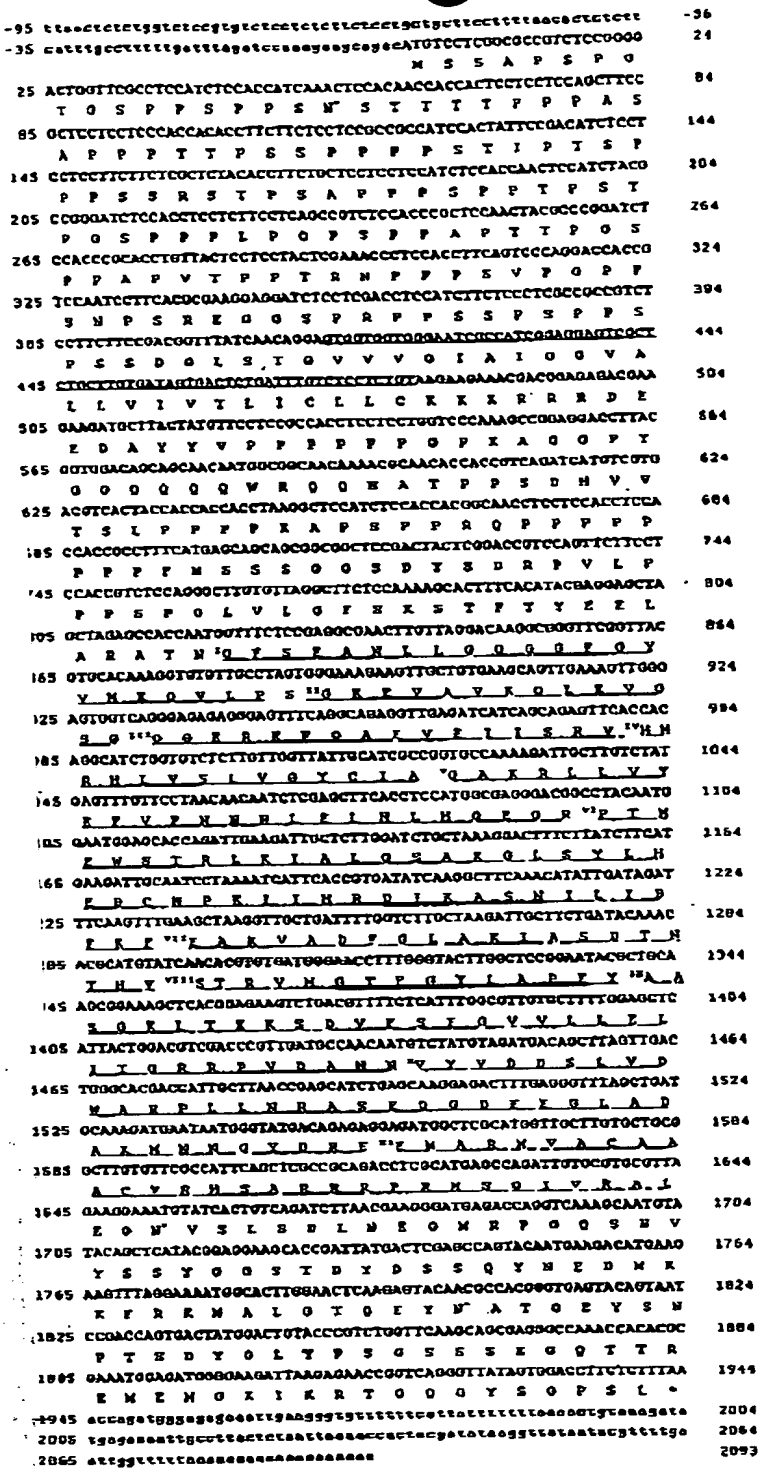

Figure 1C

685 CCACCGCCTTTCATGAGCAGCAGCGGCGGCTCCGACTACTCGGACCGTCCAGTTCTTCCT 744

P P P F M S S S G G S D Y S D R P V L P

745 CCACCGTCTCCAGGGCTTGTGTTAGGCTTCTCCAAAAGCACTTTCACATACGAGGAGCTA 804

P P S P G L V L G F S K S T F T Y E E L

805 GCTAGAGCCACCAATGGTTTCTCCGAGGCGAACTTGTTAGGACAAGGCGGGTTCGGTTAC 864

A R A T N [I]G F S E A N L L G Q G G F G Y

865 GTGCACAAAGGTGTGTTGCCTAGTGGGAAAGAAGTTGCTGTGAAGCAGTTGAAAGTTGGG 924

V H K G V L P S [II]G K E V A V K Q L K V G

925 AGTGGTCAGGGAGAGAGGGAGTTTCAGGCAGAGGTTGAGATCATCAGCAGAGTTCACCAC 984

S G [III]Q G E R E F Q A E V E I I S R V [IV]H H

985 AGGCATCTGGTGTCTCTTGTTGGTTATTGCATCGCCGGTGCCAAAAGATTGCTTGTCTAT 1044

R H L V S L V G Y C I A [V]G A K R L L V Y

1045 GAGTTTGTTCCTAACAACAATCTCGAGCTTCACCTCCATGGCGAGGGACGGCCTACAATG 1104

E F V P N N N L E L H L H G E G R [VI]P T M

1105 GAATGGAGCACCAGATTGAAGATTGCTCTTGGATCTGCTAAAGGACTTTCTTATCTTCAT 1164

E W S T R L K I A L G S A K G L S Y L H

1165 GAAGATTGCAATCCTAAAATCATTCACCGTGATATCAAGGCTTCAAACATATTGATAGAT 1224

E D C N P K I I H R D I K A S N I L I D

1225 TTCAAGTTTGAAGCTAAGGTTGCTGATTTTGGTCTTGCTAAGATTGCTTCTGATACAAAC 1284

F K F [VII]E A K V A D F G L A K I A S D T N

1285 ACGCATGTATCAACACGTGTGATGGGAACCTTTGGGTACTTGGCTCCGGAATACGCTGCA 1344

T H V [VIII]S T R V M G T F G Y L A P E Y [IX]A A

1345 AGCGGAAAGCTCACGGAGAAGTCTGACGTTTTCTCATTTGGCGTTGTGCTTTTGGAGCTC 1404

S G K L T E K S D V F S F G V V L L E L

FIG. 1C(2)

1405 ATTACTGGACGTCGACCCGTTGATGCCAACAATGTCTATGTAGATGACAGCTTAGTTGAC 1464

I T G R R P V D A N N [X] V Y V D D S L V D

1465 TGGGCACGACCATTGCTTAACCGAGCATCTGAGCAAGGAGACTTTGAGGGTTTAGCTGAT 1524

W A R P L L N R A S E Q G D F E G L A D

1525 GCAAAGATGAATAATGGGTATGACAGAGAGGAGATGGCTCGCATGGTTGCTTGTGCTGCG 1584

A K M N N G Y D R E [XI] E M A R M V A C A A

1585 GCTTGTGTTCGCCATTCAGCTCGCCGCAGACCTCGCATGAGCCAGATTGTGCGTGCGTTA 1644

A C V R M S A R R R P R M S Q I V R A L

1645 GAAGGAAATGTATCACTGTCAGATCTTAACGAAGGGATGAGACCAGGTCAAAGCAATGTA 1704

E G N* V S L S D L N E G M R P G Q S N V

1705 TACAGCTCATACGGAGGAAGCACCGATTATGACTCGAGCCAGTACAATGAAGACATGAAG 1764

Y S S Y G G S T D Y D S S Q Y N E D M K

1765 AAGTTTAGGAAAATGGCACTTGGAACTCAAGAGTACAACGCCACGGGTGAGTACAGTAAT 1824

K F R K M A L G T Q E Y N* A T G E Y S N

1825 CCGACCAGTGACTATGGACTGTACCCGTCTGGTTCAAGCAGCGAGGGCCAAACCACACGC 1884

P T S D Y G L Y P S G S S S E G Q T T R

1885 GAAATGGAGATGGGGAAGATTAAGAGAACCGGTCAGGGTTATAGTGGACCTTCTCTTTAA 1944

E M E M G K I K R T G Q G Y S G P S L *

1945 *accagatgggagagaaattgaagggtgtttttttcattatttttttaaaactgtaaagata* 2004

2005 *tgagaaaattgccttactctaattaaaaccactacgatataaggttataatacgttttga* 2064

2065 *attggtttttaaaaaaaaaaaaaaaaaa* 2093

FIG. 1C(3)

```
        10          20          30          40          50          60
TTAACTCTCT GGTCTCCGTG TCTCCTCTCT TCTCCTGCTG CTTCCTTTTA ACACTCTCTT
        70          80          90         100         110         120
CATTTGCCTT TTTGATTTAG ATCCAAAGAA GCAGACATGT CCTCGGCGCC GTCTCCGGGG
       130         140         150         160         170         180
ACTGGTTCGC CTCCATCTCC ACCATCAAAC TCCACAACCA CCACTCCTCC TCCAGCTTCC
       190         200         210         220         230         240
GCTCCTCCTC CCACCACACC TTCTTCTCCT CCGCCGCCAT CCACTATTCC GACATCTCCT
       250         260         270         280         290         300
CCTCCTTCTT CTCGCTCTAC ACCTTCTGCT CCTCCTCCAT CTCCACCAAC TCCATCTACG
       310         320         330         340         350         360
CCGGGATCTC CACCTCCTCT TCCTCAGCCG TCTCCACCCG CTCCAACTAC GCCCGGATCT
       370         380         390         400         410         420
CCACCCGCAC CTGTTACTCC TCCTACTCGA AACCCTCCAC CTTCAGTCCC AGGACCACCG
       430         440         450         460         470         480
TCCAATCCTT CACGCGAAGG AGGATCTCCT CGACCTCCAT CTTCTCCCTC GCCGCCGTCT
       490         500         510         520         530         540
CCTTCTTCCG ACGGTTTATC AACAGGAGTG GTGGTGGGAA TCGCCATCGG AGGAGTCGCT
       550         560         570         580         590         600
CTGCTTGTGA TAGTGACTCT GATTTGTCTC CTCTGTAAGA AGAAACGACG GAGAGACGAA
       610         620         630         640         650         660
GAAGATGCTT ACTATGTTCC TCCGCCACCT CCTCCTGGTC CCAAAGCCGG AGGACCTTAC
       670         680         690         700         710         720
GGTGGACAGC AGCAACAATG GCGGCAACAA AACGCAACAC CACCGTCAGA TCATGTCGTG
       730         740         750         760         770         780
ACGTCACTAC CACCACCACC TAAGGCTCCA TCTCCACCAC GGCAACCTCC TCCACCTCCA
       790         800         810         820         830         840
CCACCGCCTT TCATGAGCAG CAGCGGCGGC TCCGACTACT CGGACCGTCC AGTTCTTCCT
       850         860         870         880         890         900
CCACCGTCTC CAGGGCTTGT GTTAGGCTTC TCCAAAAGCA CTTTCACATA CGAGGAGCTA
       910         920         930         940         950         960
GCTAGAGCCA CCAATGGTTT CTCCGAGGCG AACTTGTTAG GACAAGGCGG GTTCGGTTAC
       970         980         990        1000        1010        1020
GTGCACAAAG GTGTGTTGCC TAGTGGGAAA GAAGTTGCTG TGAAGCAGTT GAAAGTTGGG
      1030        1040        1050        1060        1070        1080
AGTGGTCAGG GAGAGAGGGA GTTTCAGGCA GAGGTTGAGA TCATCAGCAG AGTTCACCAC
      1090        1100        1110        1120        1130        1140
AGGCATCTGG TGTCTCTTGT TGGTTATTGC ATCGCCGGTG CCAAAAGATT GCTTGTCTAT
      1150        1160        1170        1180        1190        1200
GAGTTTGTTC CTAACAACAA TCTCGAGCTT CACCTCCATG GCGAGGGACG GCCTACAATG
      1210        1220        1230        1240        1250        1260
GAATGGAGCA CCAGATTGAA GATTGCTCTT GGATCTGCTA AAGGACTTTC TTATCTTCAT
      1270        1280        1290        1300        1310        1320
GAAGATTGCA ATCCTAAAAT CATTCACCGT GATATCAAGG CTTCAAACAT ATTGATAGAT
      1330        1340        1350        1360        1370        1380
TTCAAGTTTG AAGCTAAGGT TGCTGATTTT GGTCTTGCTA AGATTGCTTC TGATACAAAC
      1390        1400        1410        1420        1430        1440
ACGCATGTAT CAACACGTGT GATGGGAACC TTTGGGTACT TGGCTCCGGA ATACGCTGCA
      1450        1460        1470        1480        1490        1500
AGCGGAAAGC TCACGGAGAA GTCTGACGTT TTCTCATTTG GCGTTGTGCT TTTGGAGCTC
      1510        1520        1530        1540        1550        1560
```

FIG. 1D(1)

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ATTACTGGAC GTCGACCCGT TGATGCCAAC AATGTCTATG TAGATGACAG CTTAGTTGAC
      1570        1580        1590        1600        1610        1620
TGGGCACGAC CATTGCTTAA CCGAGCATCT GAGCAAGGAG ACTTTGAGGG TTTAGCTGAT
      1630        1640        1650        1660        1670        1680
GCAAAGATGA ATAATGGGTA TGACAGAGAG GAGATGGCTC GCATGGTTGC TTGTGCTGCG
      1690        1700        1710        1720        1730        1740
GCTTGTGTTC GCCATTCAGC TCGCCGCAGA CCTCGCATGA GCCAGATTGT GCGTGCGTTA
      1750        1760        1770        1780        1790        1800
GAAGGAAATG TATCACTGTC AGATCTTAAC GAAGGGATGA GACCAGGTCA AAGCAATGTA
      1810        1820        1830        1840        1850        1860
TACAGCTCAT ACGGAGGAAG CACCGATTAT GACTCGAGCC AGTACAATGA AGACATGAAG
      1870        1880        1890        1900        1910        1920
AAGTTTAGGA AAATGGCACT TGGAACTCAA GAGTACAACG CCACGGGTGA GTACAGTAAT
      1930        1940        1950        1960        1970        1980
CCGACCAGTG ACTATGGACT GTACCCGTCT GGTTCAAGCA GCGAGGGCCA AACCACACGC
      1990        2000        2010        2020        2030        2040
GAAATGGAGA TGGGGAAGAT TAAGAGAACC GGTCAGGGTT ATAGTGGACC TTCTCTTTAA
      2050        2060        2070        2080        2090        2100
ACCAGATGGG AGAGAAATTG AAGGGTGTTT TTTCATTATT TTTTTAAAAC TGTAAAGATA
      2110        2120        2130        2140        2150        2160
TGAGAAAATT GCCTTACTCT AATTAAAACC ACTACGATAT AAGGTTATAA TACGTTTTGA
      2170        2180        2190        2200        2210        2220
ATTGGTTTTT AAAAAAAAAA AAAAAAAAA- .......... .......... ..........
```

Figure 1(d) (continued)

```
LTLWSPCLLS SPAASF*HSL HLPF*FRSKE ADMSSAPSPG TGSPPSPPSN STTTTPPPAS
APPPTTPSSP PPPSTIPTSP PPSSRSTPSA PPPSPPTPST PGSPPPLPQP SPPAPTTPGS
PPAPVTPPTR NPPPSVPGPP SNPSREGGSP RPPSSPSPPS PSSDGLSTGV VVGIAIGGVA
LLVIVTLICL LCKKKRRRDE EDAYYVPPPP PPGPKAGGPY GGQQQQWRQQ NATPPSDHVV
TSLPPPPKAP SPPRQPPPPP PPPFMSSSGG SDYSDRPVLP PPSPGLVLGF SKSTFTYEEL
ARATNGFSEA NLLGQGGFGY VHKGVLPSGK EVAVKQLKVG SGQGEREFQA EVEIISRVHH
RHLVSLVGYC IAGAKRLLVY EFVPNNNLEL HLHGEGRPTM EWSTRLKIAL GSAKGLSYLH
EDCNPKIIHR DIKASNILID FKFEAKVADF GLAKIASDTN THVSTRVMGT FGYLAPEYAA
SGKLTEKSDV FSFGVVLLEL ITGRRPVDAN NVYVDDSLVD WARPLLNRAS EQGDFEGLAD
AKMNNGYDRE EMARMVACAA ACVRHSARRR PRMSQIVRAL EGNVSLSDLN EGMRFGQSNV
YSSYGGSTDY DSSQYNEDMK KFRKMALGTQ EYNATGEYSN PTSDYGLYPS GSSSEGQTTR
EMEMGKIKRT GQGYSGPSL* TRWERN*RVF FHYFFKTVKI *ENCLTLIKT TTI*GYNTF*
IGF*KKKKK
```

Figure 1(e)

```
ATTACTGGAC GTCGACCCGT TGATGCCAAC AATGTCTATG TAGATGACAG CTTAGTTGAC
      1570        1580        1590        1600        1610        1620
TGGGCACGAC CATTGCTTAA CCGAGCATCT GAGCAAGGAG ACTTTGAGGG TTTAGCTGAT
      1630        1640        1650        1660        1670        1680
GCAAAGATGA ATAATGGGTA TGACAGAGAG GAGATGGCTC GCATGGTTGC TTGTGCTGCG
      1690        1700        1710        1720        1730        1740
GCTTGTGTTC GCCATTCAGC TCGCCGCAGA CCTCGCATGA GCCAGATTGT GCGTGCGTTA
      1750        1760        1770        1780        1790        1800
GAAGGAAATG TATCACTGTC AGATCTTAAC GAAGGGATGA GACCAGGTCA AAGCAATGTA
      1810        1820        1830        1840        1850        1860
TACAGCTCAT ACGGAGGAAG CACCGATTAT GACTCGAGCC AGTACAATGA AGACATGAAG
      1870        1880        1890        1900        1910        1920
AAGTTTAGGA AAATGGCACT TGGAACTCAA GAGTACAACG CCACGGGTGA GTACAGTAAT
      1930        1940        1950        1960        1970        1980
CCGACCAGTG ACTATGGACT GTACCCGTCT GGTTCAAGCA GCGAGGGCCA AACCACACGC
      1990        2000        2010        2020        2030        2040
GAAATGGAGA TGGGGAAGAT TAAGAGAACC GGTCAGGGTT ATAGTGGACC TTCTCTTTAA
      2050        2060        2070        2080        2090        2100
ACCAGATGGG AGAGAAATTG AAGGGTGTTT TTTCATTATT TTTTTAAAAC TGTAAAGATA
      2110        2120        2130        2140        2150        2160
TGAGAAAATT GCCTTACTCT AATTAAAACC ACTACGATAT AAGGTTATAA TACGTTTTGA
      2170        2180        2190        2200        2210        2220
ATTGGTTTTT AAAAAAAAAA AAAAAAAAA. .......... .......... ..........
```

FIG. 1D(2)

```
LTLWSPCLLS SPAASF*HSL HLPF*FRSKE ADMSSAPSPG TGSPPSPPSN STTTTPPPAS
APPPTTPSSP PPPSTIPTSP PPSSRSTPSA PPPSPPTPST PGSPPPLPQP SPPAPTTPGS
PPAPVTPPTR NPPPSVPGPP SNPSREGGSP RPPSSPSPPS PSSDGLSTGV VVGIAIGGVA
LLVIVTLICL LCKKKRRRDE EDAYYVPPPP PPGPKAGGPY GGQQQQWRQQ NATPPSDHVV
TSLPPPPKAP SPPRQPPPPP PPPFMSSSGG SDYSDRPVLP PPSPGLVLGF SKSTFTYEEL
ARATNGFSEA NLLGQGGFGY VHKGVLPSGK EVAVKQLKVG SGQGEREFQA EVEIISRVHH
RHLVSLVGYC IAGAKRLLVY EFVPNNNLEL HLHGEGRPTM EWSTRLKIAL GSAKGLSYLH
EDCNPKIIHR DIKASNILID FKFEAKVADF GLAKIASDTN THVSTRVMGT FGYLAPEYAA
SGKLTEKSDV FSFGVVLLEL ITGRRPVDAN NVYVDDSLVD WARPLLNRAS EQGDFEGLAD
AKMNNGYDRE EMARMVACAA ACVRHSARRR PRMSQIVRAL EGNVSLSDLN EGMRPGQSNV
YSSYGGSTDY DSSQYNEDMK KFRKMALGTQ EYNATGEYSN PTSDYGLYPS GSSSEGQTTR
EMEMGKIKRT GQGYSGPSL  TRWERN*RVF FHYFFKTVKI *ENCLTLIKT TTI*GYNTF*
IGF*KKKKK
```

FIG. 1E